

July 26, 2006

Murray Miller
South Florida Water Management District
P.O. Box 24680
West Palm Beach, Florida 33416



Dear Mr. Miller:

On behalf of the Everglades Foundation, I write this letter to provide comments on the proposed rule *MFL CRITERIA FOR LOWER EAST COAST REGIONAL PLANNING AREA, 40E-8, Sections 021, 221, 421*, for the *Northeast Subregion of Florida Bay*. We would like to commend the work of South Florida Water Management District (District) staff in adopting a resource-based approach, using a submerged aquatic vegetation (SAV) species as an indicator of the salinity transition zone. The *Technical Documentation to Support Development of Minimum Flows and Levels for Florida Bay* provided an excellent summary of this approach and the analyses used to document the major findings that were used in developing the proposed rule. This resource-based approach and scientific support represents a sound model for future minimum flows and levels (MFL).

Our primary concern with the proposed rule is the identified "return frequency" for the MFL violation. A review of the modeling results using the SFWMM for the Taylor River location (Appendix G of the technical document) indicates that significant harm occurred twice in the 36-year simulation period for Future with CERP (CERP1), which represents a *return frequency of significant harm* (two exceedances within two consecutive years) of 1-in-18 years. The NSM scenario produced a return frequency of 1-in-36 years. However, this is not the same as the proposed "return frequency" (more than once in a six-year period) for a Florida Bay MFL violation. The modeling results do not define a *frequency of violation* as used in the proposed MFL rule.

It is easy to construct damaging scenarios that are more likely to occur than the proposed "more often than once in a six-year period." For example, there is a higher probability of occurrence that salinities above 30 psu could occur for three out of five years (including two consecutive years) without triggering a violation.

We therefore recommend that the "more often than once in a six-year period" be removed to ensure that the proposed rule does not result in serious harm relative to recovery of *Ruppia maritima* and other SAV habitat.

Given that *Ruppia* requires *at least* one year for recovery, the frequency presented in the rule may result in the inability of this species to recover from multiple years of salinity stress without triggering the violation. Additional relevant stressors, such as timing of high salinity events, particularly as it relates to the sensitivity of *Ruppia* germination and seedling development, high temperatures, and availability of dissolved oxygen, are also

likely to impact the ability of recovery of this species further justifying a more conservative approach.

We believe that a conservative approach is also justified given the uncertainties documented not only by the peer review panel, but also contained within the technical report itself with regard to the selection of these parameters. Because the rule is written such that each parameter of the proposed rule builds on the other, the outcome that results from the rule is dependent on each individual piece. Thus, the viability of the rule relative to its ability to meet the significant harm standard is dependent on the strength (or weakness) of each defining piece. As noted by the science peer review panel in its report *Overall Review and Responses to Technical Questions to "Technical Documentation to Support Development of Minimum Flows and Levels for Florida Bay,"* the proposed MFL standard is best viewed as a "field scale experiment" that may result in changing the proposed inflow goals depending on future ecosystem responses, which will require careful monitoring. We therefore concur with several critical recommendations presented in the technical report that identify the need for continued monitoring of *Ruppia* relative to its responses to salinity levels and variability to ensure its viability as an appropriate indicator species and, more importantly, to document this role relative to other ecosystem responses (e.g., invertebrates and fish).

We are supportive of the proposed 40E-8-421(9) that identifies prevention and recovery strategies, though we believe the language in subsection 40E-8-421(9)(c) could be strengthened to include additional monitoring needs that were identified in both the peer review report and within the District's technical document. We recommend that this proposed MFL rule also include the identification of activities in subsection 40E-8.011, committed to by the District, similar to the language contained within this subsection for the Northwest Fork of the Loxahatchee River. In particular, we believe that, given the important monitoring being conducted in this region, language be added to include a requirement that the Florida Bay MFL be revised at least every five years as well as the associated recovery and prevention strategies included in subsection 40E-8-421(9).

Finally, we recommend that the District undertake a more detailed review of the proposed rule relative to its potential impacts to the American crocodile, a federally- and state-listed endangered species. Salinities that exceed 20 parts per thousand can negatively affect not only hatchlings, but also growth rates of juvenile crocodiles. Section 9 of the Endangered Species Act makes it unlawful for any person to "take" any endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). The Department of Interior regulations that implement the statute indicate that harm in the definition of "take" in the Act "...may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering." 50 CFR § 17.3 (2005). Additionally, the significant harm standard may result in adverse modification of designated critical habitat for this species. We recommend that District representatives consult with the U.S. Fish and Wildlife Service's South Florida Ecological Services Office to ensure compliance with Section 9 of the Act.

Thank you for the opportunity to provide comments. Please contact me at the address below if you have questions.

Sincerely,

A handwritten signature in cursive script that reads "Betty Grizzle".

Betty Grizzle, D.Env.
Wetland Scientist
Everglades Foundation
18001 Old Cutler Road, Suite 625
Palmetto Bay, Florida 33157